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*Photograph by R. R. Earle*

GREEK LODGING GROUP OF ELEVEN MEN ON THE NORTH SIDE

Seven men sleep in this room; there are two stables in the basement of this house with stalls for thirteen horses

# THE TRANSITION TO AN OBJECTIVE STANDARD OF SOCIAL CONTROL

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## I. INTRODUCTION

THE PROBLEM STATED.—SCOPE OF CRITICISM.—ORIGIN AND  
FUNCTION OF UTILITARIANISM.—LIMITATIONS OF UTILI-  
TARIANISM.—CRITICISM OF CURRENT PSYCHOLOGY AND  
ETHICS.—THE NEW VIEWPOINT.—CONSEQUENT REVISION  
OF VALUES.—PLAN OF TREATMENT

So much has been written concerning the evils of individualism and the mistakes of the hedonistic psychology and utilitarian ethics, without suggesting a satisfactory means of curing these evils or correcting these mistakes, that one is forced to believe that something is wrong with the method of attack. One reason for this failure may be that the significance of utilitarianism as a stage in the development of social theory has not yet been rightly comprehended and that we do not adequately foresee what should be the next step in our social philosophy and policy. This study is an attempt, (1) to throw utilitarianism into perspective with the wider social forces and with the philosophical and psychological theory of its time and our time; (2) to show that the main current of present-day social theory, and likewise of ethical theory so far as it is social rather than theological and absolutistic in character, is largely an outgrowth of utilitarianism, or at least may be grouped in close connection with it; (3) to argue that we cannot escape the limitations imposed by a utilitarian ethics and by a hedonistic psychology upon our social policy until we reconstruct our system of social values, until we abandon the individual as the measure of all things social, and fix upon the group, even the widest conceivable group possessing solidarity, as the unity which lives, acts, and progresses or deteriorates. Such a change in emphasis

obviously involves a reconstruction of our current psychology and ethics; for these two sciences as now written are essentially individualistic, and hence impotent so far as contribution to a constructive sociology and social policy is concerned.

Only an outline of the argument can be presented within the present limits, but it can be stated clearly and consistently enough, it is hoped, to make a point of departure, as well as furnish a basis for criticism. The second and third chapters of the study, on "The Neural Correlate of Feeling" and "The Cause of the Act," have been included, because the influence of feeling upon social activity has been and yet is a central problem in the development of social and ethical theory, though the relationship has been but unsatisfactorily worked out. In England it has been an academic problem since the time of Hobbes.<sup>1</sup> This problem came particularly to the fore among the utilitarians and, though somewhat obscured and below the surface, has by no means been wanting to the neo- and idealistic utilitarians and the other modern ethical individualists who would disclaim utilitarian parentage or connection. It has also, as a problem, divided the attention of the socialistic writers of the nineteenth century, who, quite conceivably, were not able to throw off the prevailing psychology and ethics of their time; though they were checks upon, and largely in contradiction with, their social policy. The greater portion of the critical parts of this study deals with the utilitarians and their successors and predecessors, because they have been the center of modern English and American social policy and social and ethical theory.<sup>2</sup> Short excursions are made into related fields to

<sup>1</sup> Cf. Sidgwick, *History of Ethics*, 163.

<sup>2</sup> In Germany there has been a different theoretical basis, that of a state philosophy, which was at the same time essentially a moral philosophy (*Rechtsphilosophie*). Cf. Small, *The Cameralists*. The hedonistic and utilitarian philosophies, however, did enter Germany, largely from the English of Hobbes, Locke, and Hume and their successors, perhaps mainly by way of Helvetius and Rousseau and their contemporaries, through Schiller, Goethe, Fichte, Lotze, and others. Professor Small has also found indications of German contact in the eighteenth century with Hume and his contemporaries. In France, Helvetius took much from Hobbes, while the intellectual connections of Rousseau with Locke are well known. The main current of social theory

give a completer account of the process of thought. No attempt will be made, however, to cover the whole ground, or to give a history of the development of utilitarian ethics. Space permits only the selection of types.

Utilitarianism, as has been pointed out,<sup>3</sup> was with Bentham and his coworkers and immediate followers mainly a movement in social policy. It was essentially a practical reform movement which in the first half of the nineteenth century accomplished great political results in England by way of insisting upon equal privileges and democratic recognition for the masses.<sup>4</sup> But all movements of social policy, if they do not grow directly out of a social philosophy—which perhaps can never wholly account for them—must create a social philosophy to justify their existence and interpret their aims to the masses of the people of all degrees. Utilitarianism could and policy in France, because of the failure consistently to carry out early democratic declarations, did not get beyond this early hedonism over into the English phase of utilitarianism of the first half of the nineteenth century, except in a partial degree in some of the socialists of whom Fourier and Proudhon are types. The individualism and hedonism of French socialism of the nineteenth century stands out in strong contrast with the socialism of Rodbertus, Marx, and Engels in Germany, though there was an undercurrent of hedonistic, "utilitarian," and even anarchistic socialism in Germany, as in the case of Weitling, Lassalle, and others. The two types of socialism can also be distinguished in England, though its hedonistic and utilitarian affiliations were predominant there, as in Morris, Bax, Ruskin, and others, mainly because there was no distinct *Rechtsphilosophie*, grown out of a traditional governmental and social policy (*Cameralism*), as in Germany. The intuitionistic and theological line of thought held somewhat of this latter relation in England, though even it was individualistic rather than social or paternalistic in its viewpoint. Cf. Small, *The Cameralists*; Sidgwick, *History of Ethics* (3d ed.), chap. iv; Helvetius, *De l'esprit*, discours iii, esp. pp. 292, 324, 325 (ed. Paris, 1758); Hobbes, *Leviathan* (ed. Molesworth), 40 ff.; Büsch, *Geldumlauf*, Introduction, *et passim*; Kirkup, *History of Socialism*; Ely, *Modern French and German Socialism*; Spargo, *Socialism*, chap. ii; Martineau, *Types of Ethical Theory*, (3d ed.), II; Wright, *The Ethical Significance of Pleasure, Feeling, and Happiness in Modern Non-Hedonistic Systems*.

<sup>3</sup> Cf. Dewey and Tufts, *Ethics*, 287; Green, *Prolegomena to Ethics*, 361; Sidgwick, *History of Ethics*, 236 ff.; Mill, "Bentham," *Dissertations and Discussions*, I, 355 ff.

<sup>4</sup> Bentham's two leading democratic principles were: The "greatest happiness of all those whose interest is in question," and Everyone to count for one, and only for one. Cf. *Principles of Morals and Legislation*, chap. i, sec. 1, note.

choose as the psychological bases of its philosophy either the intuitionism of the church philosophy, or the empirical hedonism of the free lances, coming down through Hobbes, Locke, Hume, Helvetius, Hartley, and others.<sup>5</sup> Intuitionism was aristocratic, just as the church was generally opposed to social reforms. So the democratic-individualistic hedonism of the free thinkers came to be the basis of the utilitarian social policy just as it had earlier been that of the "liberty, equality, fraternity" philosophy of democracy in France and America. In fact, utilitarianism, in common with the democratic philosophy of the time, was a more or less conscious demand that each individual should be given a share in the egoistic and hedonic satisfactions which the social system afforded.

Most thinkers of the present regard the doctrines of utilitarianism as put forth by Bentham and his immediate followers, like the doctrines of democracy of Rousseau and Schiller and their followers, as overthrown. But the spirit of utilitarianism still lives and corrupts our social philosophy and policy. Important as were its earlier services, it now exerts an unsalutary influence in a democratic era, because it is essentially individualistic; because it aims primarily at democratic egoistic satisfaction rather than at democratic social conservation; because it is, despite its emphasis upon a democratic distribution of privilege and satisfaction, destructive rather than constructive. Its influence is still manifest in the reigning social theory and policy. And a more productive and long-sighted social policy and theory cannot be substituted so long as we retain our present individualistic psychology and ethics as their bases.

At the present time psychology is essentially solipsistic. As a science it recognizes only conscious processes,<sup>6</sup> and centers

<sup>5</sup> Cf. Sidgwick, *History of Ethics*, 163, 204, 224, 236 ff.; Locke, *Essay Concerning Human Understanding*, Bk. IV; Helvetius, *op. cit.*; Hartley, *Man*; Stephen, *English Thought in the Eighteenth Century*, II, 80 ff.; Martineau, *op. cit.*, Part II, Bk. II, branch i.

<sup>6</sup> Cf. McDougall, *Introduction to Social Psychology*, 3, 15; also *Physiological Psychology*, 1, 2. McDougall, though he first made this criticism, has not pointed out the most effective way in which a new psychology can be written. He lays too much stress upon a theory of the instincts and emotions,

its treatment about a highly sophisticated and unreal self,<sup>7</sup> which actually functions only in the most limited sphere of social activity. The significance of the work of the students of "abnormal" psychology and of the psychology of "suggestion" and physiological and comparative psychology has not been apprehended by the orthodox psychologists as yet. They have not taken over these data into their conventional textbooks. When they do so these treatises will be revolutionized, and the self, the socius, the individual, will be defined in such terms that the sociologist will recognize it. The solipsistic nature of this self will disappear and the self will come to be viewed as a factor subject to control in an objective social situation.<sup>8</sup> Ethics also is individualistic in its evaluations, which he thereby raises almost to the rank of entities. The more fruitful line of development, it would seem, is in the direction of the study of the cortex and the lower nervous system as a mechanism, i.e., of conduct, in order to get at the nature and functioning of all types of activity processes, conscious and unconscious. At all events this would prevent us from making of consciousness a self-sufficient entity, instead of a means to adjustment to nature, as Professor Judd has done. Cf. "The Evolution of Consciousness," *Psychological Review* (March, 1910), 91 ff. For definitions of psychology bearing out the assertion in the text, see James, *Psychology*, I, 1; Sully, *The Human Mind*, I, 1; Wundt, *Outlines of Psy.* (tr. Judd), 23; Titchener, *Outlines of Psy.*, 6; Stout, *Manual of Psy.*, 4; Thorndike, *Elements of Psy.*, 1; Höffding, *Outlines of Psy.* (tr. Lowndes), 1; Angell, *Psychology*, 1; Baldwin, *Handbook of Psy.* (S. and I.), 8; etc.

<sup>7</sup> For definitions and descriptions of this solipsistic self, see Baldwin, *op. cit.* (S. and I.), 67, (F. and W.), 170; Angell, *Psy.*, 396; Höffding, *op. cit.*, 136; Thilly, *Philos. Rev.*, XIX, 32; Stout, *op. cit.*, 517; Titchener, *op. cit.*, 301; Wundt, *op. cit.*, 242; James, *op. cit.*, 291, 293, 301; Sully, *op. cit.*, 481; etc.

<sup>8</sup> G. H. Mead, *Journal of Phil., Psy. and Sci. Methods* (Mar. 31, 1910), 174, has attempted to remove this solipsistic character of the self of psychology by insisting upon an initially social individual (a conception which, in some form or other, goes back at least as far as the Greek philosophers, and to Adam Smith and his contemporaries among the moderns), stating the matter, however, from the standpoint of consciousness alone and thus from the subjectivistic standpoint of the conventional psychologist. In the same article he rejects the idea that psychology should accept the objective definition of the social object or socius which the social sciences offer. However, the psychologists of the unconscious and relatively unconscious processes and the social psychologists, dealing with the same material, are undermining the artificial and conventional psychology of the highly conscious processes, and will assist in securing the adoption of the objective and social viewpoint in treating of neural and activity processes, whether conscious or unconscious.

limiting the definition of moral activity to include only the field of volition, that is, of conscious choice.<sup>9</sup> This is the old limitation which justified retributive punishment, and is wholly apart from the spirit of the most enlightened social practice of the present. Manifestly we need an ethics which will take account of the act, whether consciously or unconsciously performed, in relation to both its remote and immediate social results. In such an ethics "intention," that is, consciousness of one's tendency to act in a certain direction, will figure only as an aid to prevention. The act will be judged morally, that is, with reference to its social meaning, and treated constructively, on the basis of its discoverable causes. Consciousness will not figure as an entity or absolute in this causation, as it does in present ethical theory, but merely as one of the most obvious and effective points at which, by enlisting the additional asset of the individual's attention, we can begin to work more successfully preventively and reformatively and educationally.<sup>10</sup> This is to say that conduct will be judged objectively, when it is judged scientifically and socially.<sup>11</sup>

Our present-day psychology and ethics then are essentially of the individualistic type which furnished the basis of the

<sup>9</sup> Cf. Dewey and Tufts, *Ethics*, 201, 202 ff., 250, as a most recent example. Professor Dewey is responsible for these passages.

<sup>10</sup> This is not to say, of course, that it is not of the greatest importance to bring as many of his activities as possible into the consciousness of the individual as a means to social control. It is rather a plea for the recognition of the fact that most of our activities are and always must be on a more or less unconscious and habitual basis, and hence of the necessity for a psychology which will make provision for the analysis and control of these activities. Professor Judd, *op. cit.*, especially pp. 88, 89, has defended the limitation of psychology to the field of consciousness. He appears not to have understood the point at issue. McDougall's demand, which he so strongly criticizes (pp. 88, 89), and the one made here, are that psychologists broaden their subject so as to afford a method for bringing all activities directly or indirectly under either individual or social (collectivistic) conscious control.

<sup>11</sup> Cf. an excellent paper by Professor Ellwood, "The Sociological Basis of Ethics," *International Journal of Ethics* (April, 1910), 314 ff. Professor Ellwood argues here in a general way for an objective and sociological basis for ethics, as does Professor Small, *General Sociology*, 33 ff., and Part V, and elsewhere. It is doubtful, however, if either has seen all the implications of limiting the scope of moral activity to the field of consciousness and volition.



old utilitarian and pseudo-democratic theory. So long as we retain them they will hinder the development of a consistent social theory which can be used—as a means of justification and communication—for the basis of a constructive and creative social policy. But if we rid ourselves of them, evidently it must be accomplished by means of bringing a new viewpoint into social and ethical science, the objective viewpoint. The best results were not possible from such an objective criterion, until we collected a considerable fund of accurate information about the working of the social organism<sup>12</sup> or of society as a whole, until we measured and defined a considerable number of social processes, and thus became able to define in a provisional way the socius or social object. Thanks to the work of the social technologists, the social psychologists, and other heretical psychologists (however defective parts of their work are), we have already made a beginning in this objective and constructive study of social processes. Men of affairs in government and practical activi-

<sup>12</sup> The term "social organism" will be used more or less in this study to indicate the unitary, vital, and functioning nature of social groups, and here of the largest group which we can characterize as being in some degree a unity of social functions, as possessing solidarity; and such can now be said of practically all mankind in some aspects of living. This usage must not be confounded with the biological and structural analogy of Spencer and his early continental imitators. The term as here employed is primarily functional in its meaning and is used because it implies a unity of functioning, a mutual dependence growing constantly greater with social development, which cannot be expressed by such an indefinite and non-descriptive term as "social process." To define the "social process" merely in terms of "the interaction of individuals" or socii, is analogous to stopping with the older natural philosophers who, before the formulation of the law of gravitation, accounted for movement in the physical world as the "continual flux of matter," i.e., the interaction of atoms, or of whatever elements the philosophers conceived matter as composed. As the law of gravitation established *how* matter moves, so must a functional and intelligent statement of the social process be in terms of the movement or tendency of that process and not leave it "at loose ends." The Group Struggle theorists state it in terms of increasing co-operation (cf. Ratzenhofer, *Wesen und Zweck der Politik*, secs. 63 ff.), and others define it in terms of growth of specialization and division of function or labor (cf. Durkheim, *De la division du travail social*, and Pioger, *La vie sociale*, 42 ff.). The point is the same. It emphasizes the growth in essential or organic unity of the group in the co-operative struggle for survival. It is in this sense that the group is organic, that society is an organism.

ties have always made large use of the objective method. They have defined or assumed their social objects and have built upon them—whether with good or bad results, depending largely upon the validity and accuracy of their definitions and assumptions. It is the function of a valid and accurate social science to make these definitions more definite. In this work a truly functional psychology can be of the greatest service.

With the coming of this objective treatment of the socius or social object and of the social processes, we may expect revolutions in our way of thinking and in our social policy. We may expect social conservation, instead of the individual democratic gratification of utilitarianism and of the old pseudo-democracy, to be the ideal of practice. This conservation will of necessity be in the nature of the strengthening and improvement of the whole social organism, of the whole social process. The conscious exertion of individuals must be directed toward the survival, growth, and perfection of the race with all that this implies and toward the development of a scientifically determined and controlled social organization which will contribute to this end.<sup>13</sup> Such an organization of effort presupposes an adequate system of social control, a social control based upon popular will and sanction, but coercive where the consciously and scientifically determined ideal for the race is disregarded or violated, purposely or accidentally.

The detail and data for the argument that our traditional and still dominant ethical and social theory remains essentially individualistic and hedonistic (subjectivistic) in viewpoint, and for the necessity of reconstructing this viewpoint with its implications for social control, constitute the body of this study. It

<sup>13</sup> Ellwood, *op. cit.*, 324, says, "The general trend of the development of scientific knowledge of human society is to establish three standards or norms, all of which have ethical implications: social survival, social efficiency, and social harmony." The only one of these three norms which he explains, however, is "survival," which would appear to be the ultimate standard or test of an intelligent social activity. Even if we explain the growth of society as increasing co-operation, we must explain co-operation finally in terms of survival. Cf. Kropotkin, *Mutual Aid as a Factor in Evolution*; also Small, *op. cit.*, 38-39.

is held that, so long as individualism and subjectivism dominate, as they now do, our psychological and ethical theory, a scientific sociology and a constructive social policy will find themselves constantly opposed and weakened. It is contended that the solution of the problem lies in a change of emphasis from the old individualistic, though democratic, theory of egoistic satisfactions to an objective socially constructive policy. The treatment of the subject has been divided into three general sections. The first deals with the cause of the act, and attempts to determine what is the actual relation of feeling to the act. The second examines the theory that pleasure or happiness is the end or object of activity in its social relations, including a critical examination of a number of the utilitarian and hedonistic and other theories. The third is concerned with the object of, and the sanction for, a change in the theoretical criterion of the social control of activity.

## II. THE NEURAL CORRELATE OF FEELING

FORMER VAGUENESS OF THE TERM FEELING.—EARLIER ATTEMPTS AT CORRELATION.—THEORY OF THE CORRELATE OF FEELING MODES.—RELATIVITY OF FEELING

In order to discuss intelligently the problems in this and the following chapters it will be necessary to devote most of the present chapter to an examination of the nature of feeling.

Even up to the present time most psychologists have pretty generally confounded feeling with sensory and ideational consciousness. The older writers used feeling as a general term for all consciousness,<sup>1</sup> and even some of our later psychologists so

<sup>1</sup>Hobbes, Helvetius, Bain, Spencer may be mentioned as examples. To Hobbes there were only two feelings in this general sense of all mental states mentioned above, appetite, desire, delight, pleasure, or joy, i.e., motion toward an object, on the one hand, and aversion, displeasure, pain, or grief, i.e., motion "fromward" the object, on the other hand ("Leviathan," *Works* [Molesworth ed.], III, 42-43). Of these feelings or emotions, however, he recognizes two classes, those of the senses and those of the mind. To those of the senses he applied the two general terms pleasure and pain, and to those of the mind, the general terms joy and grief. Since the above distinction has no qualitative value (Locke, *Essay Concerning Human Understanding*, Bk. II, chap. xx), it is plain that Hobbes identified sensational and ideational consciousness. In order

employ the term either wholly or in part.<sup>2</sup> No fact in modern psychological analysis is more patent than this confusion of feeling and the various forms of sensory and ideational consciousness. Though various writers had at different times pointed out that the same sensory processes and especially the same sensory experiences, ideas, and images were not always accompanied by the same degrees of pleasantness and unpleasantness, or that the feeling tone might sometimes be one and sometimes the other,<sup>3</sup> it was not until the types of sensations had been analyzed and abstracted beyond the traditional five, through the discoveries of neurology and experimental psychology, that it was possible to place the distinction on a scientific basis.<sup>4</sup> The discovery of separate pain sense organs has furthered this distinction. For some writers, however, this further analysis has had the effect of strengthening the confusion in their minds regarding pain and unpleasantness,<sup>5</sup> and it has led others to regard sex sensation as the original and fundamental type of pleasurable feeling.<sup>6</sup> But for the great majority of psychologists these discoveries of separate sense organs have served to bring out more clearly the fact not adequately understood before, that the various sensory and ideational processes are not constant and fixed correlates of either pleasantness or unpleasantness.

Based on these distinctions the more recent psychologists to take care of forms of consciousness and activity which would not come under this simple classification he added to this classification such psychical categories as hope, despair, fear, courage, anger, benevolence, ambition, magnanimity, jealousy, curiosity, etc. (*op. cit.*, 43 ff.). This method of providing for special cases is still in vogue, though in much less degree, among psychologists. Cf. McDougall, *Introduction to Social Psychology*, chap. v; Marshall, *Pain, Pleasure, and Aesthetics*, 64 ff.

<sup>2</sup> Gustav Spiller, *The Mind of Man* (London, 1902), is an extreme example, though traces of such confusion can be found in James, *Principles of Psy.*, Dewey, *Psy.*, and others.

<sup>3</sup> E.g., Spencer, *Prin. of Psy.* (New York, 1892), I, 287.

<sup>4</sup> Professor Max Meyer, *Psy. Rev.*, XI, 103 ff., claims at least sixteen separate types of sensations, with possibilities of more.

<sup>5</sup> H. M. Stanley, *The Evolutionary Psychology of Feeling* (London, 1895), chap. ii, holds that pain was the most primitive form of consciousness.

<sup>6</sup> Meyer refers to Lagerborg and others in this connection, *Psy. Rev.*, XV, 203 ff.

have come to regard feeling as a separate type of consciousness, as neither sensory,<sup>7</sup> nor ideational.<sup>8</sup> It is variously accounted for by these writers as a functional correlate of the bodily, conscious, or neural processes, i.e., as indicating that the organism as a whole is functioning successfully or unsuccessfully;<sup>9</sup> as a sign that the vitality or health of the organism is being built up or lowered;<sup>10</sup> or as connected with the use of stored-up nervous energy in less or greater quantities than the total supply available.<sup>11</sup> All these explanations assume that the feeling processes are the correlates of the whole bodily process, though Marshall makes some exceptions to this view in pointing out that some organ may be functioning "successfully," i.e., with pleasurable results, when the organism as a whole is not in such a favorable situation.<sup>12</sup> It has also been observed that there may be pleasantness or unpleasantness when the condition of the organism or the nature of the adjustment is exactly opposite what these formulae declare it to be.<sup>13</sup> Again, while there is undoubtedly some correspondence between feeling modes and efficient functioning in a racial sense, there is not necessarily such a correspondence on a habitual or social basis.<sup>14</sup> James Ward appears to have approached more nearly to a true statement of the relation when he reduced the correlation to terms

<sup>7</sup> Stumpf, "Ueber Gefühlsempfindungen," *Zeitsch. für Psychologie*, Bd. 44, S. 1-49, however, regards pleasantness and unpleasantness as sensations. Lotze, *Microcosmus* (tr. Hamilton and Jones), I, 243, 689, takes a similar view, as does also L. F. Ward at times, *Psychic Factors of Civilization*, 38, 42 ff. Titchener, *The Psychology of Feeling and Attention*, 290 ff., criticizes the views of Stumpf and others, holding the sensational view as does Meyer, *op. cit.*

<sup>8</sup> Cf. Angell, *Psy.*, 272 ff.; Judd, *Psy.*, 194; Titchener, *Outlines of Psy.*, 101, 108, 114; Ribot, "Sur la nature du plaisir," *Revue philosophique*, LXVIII, 181, 183; Meyer, *op. cit.*

<sup>9</sup> Meakin, *Function, Feeling, and Conduct*, 55; Dewey, "Theory of Emotion," *Psy. Rev.*, II, 31; Simmel, *Einleitung in die Morakwissenschaft*, I, 388; Judd, *Psy.*, 196-97.

<sup>10</sup> Ribot, *op. cit.*, 180 ff.; Höffding, *op. cit.*, 273; Bain, *Mind and Body*, 59; Spencer, *Prin. of Psy.*, I, 279 (New York, 1876); Titchener, *op. cit.*, 102; Royce, *Outlines of Psy.*, 179.

<sup>11</sup> Marshall, *op. cit.*, 221.

<sup>12</sup> *Ibid.*, 264-65; also Meakin, *op. cit.*, 50.

<sup>13</sup> Cf. Angell, *op. cit.*, 275.

<sup>14</sup> Cf. Marshall, *op. cit.*, 352.

of "effective" attention.<sup>15</sup> This statement, however, is indefinite, since consciousness is a variable and relative manifestation dependent upon neural processes, and it lacks content, leaving the meaning of the term "effective" ambiguous. Some of the most effective attention, so far as objective adjustment consequences are concerned, is not particularly pleasurable, as in the laborious acquirement of skill in any direction. The most considerable advance in the theory of feeling, however, was made by Meyer when he reduced the correlation of feeling modes from bodily to neural processes.<sup>16</sup> His general statement, however, is couched in mechanical terms, and his failure to recognize the existence of two fundamental lines of development in the nervous system—a fact which must be taken into account in determining internal neural adjustment—has made it necessary for him to assume a rather doubtful differential character for pain, bitter, sour, and analogous sensory processes.<sup>17</sup> Consequently these numerous exceptions destroy the unity of his theory.

All these theories of the correlate of feeling have something of value in them and have expressed partial truths. The earliest statement, going back at least as far as Hobbes among the moderns,<sup>18</sup> and to Aristotle among the ancients,<sup>19</sup> recognizes a more or less stable correspondence between the vital condition

<sup>15</sup> "There is pleasure in proportion as a maximum of attention is effectively exercised, and pain in proportion as such effective attention is frustrated by distractions, shocks, or incomplete and faulty adaptations, or fails of exercise owing to the narrowness of the field of consciousness and the slowness and smallness of its changes."—Art. "Psychology," *Encyc. Britannica* (9th ed.), XX, 71. Marshall (*op. cit.*, 236, 262), with reservations, and Stout (*Manual of Psy.*, 276), fully, accept this view.

<sup>16</sup> "The nervous correlate of pleasantness and unpleasantness must be *some form of activity in the higher nerve centers*, since it is generally admitted that only activities in the higher nerve centers are accompanied by consciousness, and pleasantness and unpleasantness are kinds of consciousness. But while the correlate of sensation is the nervous current itself, the *correlate of pleasantness and unpleasantness is the increase or decrease of the intensity of a previously constant current if the increase or decrease is caused by a force acting at a point other than the point of sensory stimulation.*"—"The Nervous Correlate of Pleasantness and Unpleasantness," *Psy. Rev.*, XV, 307.

<sup>17</sup> Cf. "The Nervous Correlate of Attention," *Psy. Rev.*, XV, 365 ff.

<sup>18</sup> Cf. *Leviathan*, *loc. cit.*, 42.

<sup>19</sup> Spencer, *op. cit.*, 277, makes this claim for Aristotle.

of the organism and its feeling modes. The development of accuracy of statement has been one of delimitation and specification of the terms of correlation, arriving at a consciousness correlate in the formula of James Ward, and at a neural correlate in that of Meyer. It is proposed here to modify Meyer's statement on the basis of the neurological investigations of Herrick, Sherrington, Parker, and others, using whatever is valuable in the other statements of correlation, in an attempt to secure an adequate functional statement of the correlation of feeling modes, and thus to define feeling and to determine its relation to the act.

In formulating an adequate and functional theory of the neural correlate of feeling it is necessary to take into account the phylogeny of the nervous system. There are, throughout the scale of animal development, two distinct types of physiological functions: (1) the vegetative or visceral functions, connected with the inner working of the bodily mechanism, such as nutrition, circulation, respiration, and (2) the exteroceptive functions, concerned with the adjustment of the organism as a whole to outside or environmental influences.<sup>20</sup> These two types of organic functions, in rising above the purely tropic type of behavior, developed more or less distinct nervous connections,<sup>21</sup> and because of the primary importance of quick movement for the preservation of the organism and of the species, the latter type of functions probably developed well-differentiated nervous connections and integrating centers first and specialized them to a greater degree than the former. This exteroceptive nervous system developed in the service of the animal in its reactions to external stimuli. Out of this general type of exteroceptive reaction developed the various peripheral or exteroceptive sense organs, such as those of a cutaneous nature—pain, temperature, tactual, chemical, and even the distance receptors, such as the sense organs of sight and hearing.<sup>22</sup> It has been established that

<sup>20</sup> Herrick, "The Evolution of Intelligence and Its Organs," *Science*, XXXI, 7.

<sup>21</sup> Herrick, "The Relations of the Central and Peripheral Nervous Systems in Phylogeny," *The Anatomical Record*, IV, 62.

<sup>22</sup> *Ibid.*, 62, 67, 68.

the mammalian cerebral cortex has developed mainly in the service of the distance receptors or higher exteroceptive sense organs of sight and hearing,<sup>23</sup> "which have dominated and set the direction of the evolution of the nervous system in vertebrates."<sup>24</sup> Thus the brain becomes in higher animal types the co-ordinating center of processes arising chiefly from peripheral or exteroceptive stimuli;<sup>25</sup> "while the co-ordinating centers of the visceral system are partly peripheral in the sympathetic ganglia and partly in this central nervous system."<sup>26</sup> In the higher and more flexible forms of nervous organization, where the tubular or dorsal nervous organization dominates,<sup>27</sup> the processes of the two systems are capable of close correlation in the higher brain centers. Where complex or conscious control is necessary all the activity tendencies of the nervous system tend to be, and for the most part are, summated in the cortex, which exists for this higher function of correlation rather than as a center for definitely specialized activity.<sup>28</sup>

Two facts of primary importance for the theory of feeling correlates are to be noted in connection with the phylogenetic development of the nervous system or systems. The first is that the sex functions and their nervous connections developed primarily as a part of the visceral functions and system. In the lowest animal forms the sex and vegetative functions are very closely related. Parallel with the development of the feeding and other visceral and of the sexual neural processes they got

<sup>23</sup> Herrick, "The Relations of the Central and Peripheral Nervous Systems in Phylogeny," *The Anatomical Record*, IV, 61.

<sup>24</sup> Herrick, *Science*, *loc. cit.*, 8.

<sup>25</sup> Herrick says, "The cerebellum has been developed from the somatic sensory column of the medulla oblongata as the chief central co-ordinating apparatus of the proprioceptive system."—*Anatom. Record*, *loc. cit.*, 64. See also Sherrington, *The Integrative Function of the Nervous System*, lecture ix.

<sup>26</sup> Herrick, *Anatom. Record*, IV, 62.

<sup>27</sup> *Ibid.*, 59.

<sup>28</sup> "The essence of cortical function is correlation and a cortical center for the performance of a particular function is a physiological absurdity, save in the restricted sense described above, as a nodal point in a very complex system of associated conducting paths. Those reflexes whose simple functions can be localized in a single center have their mechanism abundantly provided for in the brain stem."—Herrick, *Science*, *loc. cit.*, 15.



more specialized connections with the exteroceptive nervous system and developed increased powers of correlation with the exteroceptive system in the cortex.<sup>29</sup> But the neural processes of the sex organs have always remained predominantly bound up with the structure and functioning of the visceral or interoceptive nervous system. In the second place, the exteroceptive nervous system originated primarily as a means of adapting the organism to its environment, either for separating it from conditions which threatened to be unfavorable to it or for bringing it in contact with food, warmth, light, etc. Purely peripheral stimulation, because of the predominatingly skeletal muscular connections of the exteroceptive system, has thus always resulted in movement, either of avoidance or of receptivity. The union of interoceptive or visceral processes with the exteroceptive or peripheral processes has, from very early stages of development, led to receptive movements, as in the case of inclosure and assimilation of food.<sup>30</sup> This latter type of movement will take place more effectively if the connection or correlation between the two types of processes (the exteroceptive and the interoceptive processes) is made in the cortex, where sensory stimuli may operate to a greater advantage, especially in the higher forms of animal life. But an equally primitive function of peripheral nervous stimulation, and one doubtless even more important at later stages of development, was disturbance of the equilibrium of the organism, looking toward an avoiding reaction. This type of nervous process may, in its origin, be identified in general with that which in higher organisms we find ending exteroceptively in the pain sense organ. The other cutaneous sense organs, with their neural connections, have probably been differentiated off primarily from this primitive type, as have also the distance receptors or higher peripheral sensory processes mentioned above. Taste and odor sense organs have also been differentiated in this way, but they

<sup>29</sup> Cf. Herrick, *Anatom. Record*, IV, 61, and *Science*, XXXI, 8.

<sup>30</sup> Cf. G. H. Parker, "The Origin of the Nervous System and Its Appropriation of Effectors," *Pop. Sci. Mo.*, LXXV, 56, 137; Ludwig Edinger, "The Relations of Comparative Anatomy to Comparative Psychology," *Journal of Compar. Neurology and Psychol.*, XVIII, 437.

have acquired or have retained a larger proportion of visceral neural connections than the other exteroceptive sense organs have.<sup>31</sup>

The method by which the various types of exteroceptive sensory processes became differentiated from the more primitive exteroceptive avoiding processes was by means of lowering the threshold of stimulation for the sense organs which receive what are later tactual, temperature, etc., impressions. This lowering of the threshold of stimulation in the sense organs is correlated with the acquisition of more direct neural connection or correlation with the central nervous system than was provided by the primitive exteroceptive reactive apparatus, for definite or selective reactions. But, with the differentiation of primary centers within the brain for these different sense qualities, with the development of correlation pathways between the centers, and with the further elaboration of higher correlation centers, this acquisition of more direct connections and of connections with more highly differentiated centers has not destroyed the original neural connections or correlations with the general avoiding centers or processes, as is proven by the fact that an increased stimulation of any peripheral sense organ or exteroceptor other than a pain sense organ will also in higher animal forms give a pain reaction. The avoiding or pain connections and correlations of these differentiated processes have simply become relatively more indirect, while the original type of avoiding or pain process has remained unchanged structurally and has retained its original function.<sup>32</sup> This lowering of the threshold of stimulation, and the acquisition of separate connections and correlations for each specific kind of contact or cutaneous receptors and distance receptors, as distinct from the primary undifferentiated avoiding or pain receptors, has made

<sup>31</sup> Cf. Herrick, *Anatom. Record*, IV, 68. Practical evidence of this is to be found in the familiar fact that odors and tastes have a much more marked effect upon visceral, glandular, and vascular activities than sight, hearing, touch, or temperature have. The odor (and even the sight) of blood also appears frequently to have a tendency to stimulate sexually, because of the close visceral connections.

<sup>32</sup> I am indebted to Professor Herrick for the suggestion of this general structural arrangement.

it possible to have correlations of various exteroceptive nervous processes giving rise to various forms of consciousness in the higher organisms without involving pain, though pain always lies in the background as a possibility of overstimulation, fatigue, etc.

If now we apply the general principle of the neural correlation of feeling of Meyer to this theory of the structure and development of the nervous processes and their correlation of Herrick, Sherrington, Parker, and others, we shall see that the facts are taken care of readily. We find that where nervous processes are correlated, i.e., where on the one hand they supplement each other, at least in the regions of the cortex, we have the feeling mode of pleasantness, and on the other hand, where processes interrupt each other, at least in the cortex, we have the feeling mode of unpleasantness. Feeling, then, as distinct from sensory and ideational consciousness, is the result of the correlation, i.e., the supplementation or interference of nervous processes in such a way as to increase or to diminish the neural activity along a certain or given pathway. Where a nervous process or set is augmented pleasantness is experienced, and where a nervous process or set is weakened or diminished there is unpleasantness.<sup>33</sup> Accordingly both pleasantness and

<sup>33</sup> It is not necessary to raise the question here as to when either feeling or sensory consciousness first appeared phylogenetically. The purpose here is to show certain developmental and relational facts of structure and functioning in the correlation of the visceral, exteroceptive, and ideational (free cortical) neural processes, which will serve as a basis for the theory of the neural correlation of feeling modes—whenever and wherever in the development process feeling may have appeared. It is not here maintained that the existence of sensory neural processes or receptors necessarily implies sensation, or that correlation (supplementation and interference) of processes necessarily implies feeling at earlier stages of development than that of man. The presumption would be of course that they do. Professor Herrick takes the view that consciousness is in a broad sense the function of both cortical and subcortical nervous processes (*Science, loc. cit.*, 17) and that it did not originate as a superimposition upon biological processes, but as a part of the general organism in adjustment or activity (*ibid.*). But, since we know that almost all ideational and imaginal consciousness comes either directly or indirectly from the exercise of the higher sensory neural processes, and especially from the activity of the distance receptors (cf. Herrick, *ibid.*, 8), the admission of the existence of sensation arising from primitive peripheral and from visceral and sex neural

unpleasantness may exist in the same organism at the same time, provided different nervous sets are involved in the adjustment process or more than one adjustment is being made.<sup>34</sup>

According to the theory of the nervous system here accepted we should expect, from their close phylogenetic connections, that the visceral neural processes, such as those of digestion, circulation, respiration, etc., would when working properly tend to supplement each other, and consequently that their unimpeded action would, when we are conscious of it, produce pleasantness. As a matter of fact we find that such is the case.<sup>35</sup> In the same way sexual neural processes, because of their close structural connection with the visceral or vegetative neural processes, tend strongly to supplement the latter, carrying the correlation into the cortex and involving tactual, temperature, etc., sensory supplementation from the exteroceptive system, with the result that sexual activity ordinarily is highly pleasurable. But on the other hand the primitive peripheral or exteroceptive neural processes, i.e., the pain sensory neural processes, are so implanted in the nervous structure phylogenetically that they tend to interrupt the visceral or interoceptive neural processes when they come in contact with them, and even to interrupt the derivative sensory neural processes when the latter run over from their more direct connections or correlations with their own immediate instinctive response centers or cortical correlations, i.e., when stimulation is unduly increased. Consequently stimulation of the pain sense organs or strong stimulation of any peripheral sense organ is usually unpleasant.<sup>36</sup> The fundamental sensory processes and of feeling resulting from the correlation of these and other processes at a very early stage would not involve any high degree of conscious control at such a stage.

<sup>34</sup> Cf. Ribot, *op. cit.*, 180; Meyer, *Psy. Rev.*, XV, 315; Angell, *Psy.*, 275; Titchener, *op. cit.*, 108.

<sup>35</sup> Digestion tends to increase circulation, as does bodily exercise. Exercise promotes both a strong respiration and a rapid circulation and the result is distinctly pleasurable, if all the processes work normally.

<sup>36</sup> Cases in which slight stimulation of pain sense organs produces apparently a mild degree of pleasantness evidently depend upon the inhibition or assimilation of the pain sensory neural processes involved by some visceral or peripheral neural set.

interruptive nature of the pain sensory neural processes under strong stimulation makes it impossible to secure a correlation of them with higher neural sensory processes or with visceral neural processes and thus to make a high degree of pain pleasurable.<sup>37</sup> It is because of these two fundamental types of correlation of visceral or vegetative (and sex) and pain sensory neural processes, with their almost invariably pleasant and unpleasant feeling results, respectively, that feeding and sex activities on the one hand and pain sensations on the other have been so stubbornly and almost universally identified with pleasantness and unpleasantness feeling modes.<sup>38</sup> The explana-

<sup>37</sup> This statement of the neural correlation avoids the contradiction which Meyer had to meet (cf. *Psy. Rev.*, XV, 366), to the effect that supplementation of pain processes by higher sensory or ideational neural processes may tend to make pain processes the correlates of a high degree of pleasantness. According to the theory here developed, supplementation of pain and visceral (including sex) neural processes by the higher sensory or ideational neural processes could never take place independent of the predominating vegetative or interoceptive neural set, because of the phylogenetic origins and functions of pain and sex processes. So that any interference with or supplementation of either of them would cause it to tend only to have a diminished or increased effect of its customary kind.

<sup>38</sup> Such a confusion of terminology and of thinking exists in practically all our polite literature and in most scientific writing where the relations are involved. Reasons for such confusion are: the fact that vegetative, sex and pain sensory correlations with the interoceptive and exteroceptive neural processes being among the most primitive and instinctive and hence most closely correlated structurally and functionally, pain and sex sensations and activities more invariably correspond to unpleasant and pleasant feeling modes, while the other sensory and ideational neural processes vary more widely; that the higher sensory and ideational neural processes may actually connect up with the lower visceral and exteroceptive neural processes so as to produce the sensations of the latter (as in suggestion); the close resemblance between these lower sensations and the feeling modes to which they usually correspond, while the higher sensory and ideational experiences differ radically from the feeling modes with which they instinctively, habitually, or fortuitously occur. Arguments against the validity of such confusion are: just this fact that a variety of sensory experiences occur in connection with apparently the same feeling modes; the fact that pleasantness and unpleasantness can be experienced in connection with the higher sensory and ideational neural processes and the lower visceral neural processes without calling out any pain or sex or other visceral sensation whatever; and finally the fact that sensations are localized and feeling modes are not. It appears that the similarity must be accounted for on the basis of the close connection of these sensory and activity processes with the feeling correlations in their instinctive or phylogenetic origin rather than as a matter of

tion of feeling in terms of neural correlation instead of in terms of sensory or ideational consciousness does away with this confusion.

The feeling modes experienced in connection with the correlated exercise of the other exteroceptive sensory processes can be explained in terms of the same general nervous correlation. The bitter and sour sensory neural processes, the neural processes of the sense organs of the nauseating odors, etc., because of their relation to survival, have been so implanted, i.e., correlated, in the nervous system phylogenetically that when they are excited they tend to interrupt the existing visceral neural processes or sets<sup>39</sup> and, if the disturbance is very great, to bring the conflict of processes into the cortex and thus to arouse disagreeable consciousness. They tend frequently also to inhibit or interrupt the various exteroceptive sensory neural processes, such as those of sight and hearing. In either case the conflict of processes results not only in unpleasantness (where consciousness is involved) but also tends to produce a new disposition of the organism and of its organs for the purpose of escape from the stimulus.<sup>40</sup> In a similar manner the sensory neural processes connected with the sense organs of sweet and those of the various ordinarily pleasing odors, tend to strengthen the more fundamental visceral neural processes and exteroceptive com-

identity. But, even if feeling modes should be demonstrated to be only abstractions from sensory and ideational consciousness, it would not affect this theory of correlation and the resulting theory of the relativity of feeling as a criterion or valuation of activity.

<sup>39</sup> The nerves of taste and smell have much stronger visceral or interoceptive connections than those of sight or hearing have. Cf. Herrick, *Anatom. Record*, IV, 68.

<sup>40</sup> Smell and taste are by no means infallible guides, in their pleasantness and unpleasantness manifestations, especially for many of the odors and chemical combinations or tastes produced in a social or civilized order of technical control, though they are pretty reliable guides in the instinctive or uncultural animal world. Consequently ideational consciousness has to be brought into play to determine when in cultural life we can safely make exceptions to our instinctive reactions on the basis of feeling consciousness arising from smell and taste neural correlations. A similar higher conscious reference is also necessary in connection with sight and hearing and all the other peripheral senses.

binations with them, producing a flow of saliva in the glands, forward or receptive movement, etc.

In the case of sight and hearing, the nervous processes are not so closely connected with the visceral neural processes, but more closely with the other processes of the peripheral or exteroceptive nervous system. Here we find that sharp and amorphous sounds (noises) and sudden and unharmonious visual impressions tend to inhibit or disturb the nervous sets with which the auditory and visual neural processes are connected, even going over into positive pain reactions, as described above, if the stimuli are strong enough. The results are an attempt to escape from the stimulus, on the objective side of behavior, and the feeling mode of unpleasantness on the subjective side when consciousness is involved. On the other hand rhythmical sounds and symmetrical visual impressions tend to result in neural processes which supplement the neural sets with which they are connected and thus to produce receptive or advancing movements and the feeling mode of pleasantness when consciousness is involved.<sup>41</sup>

In the case of the contact receptors, or the cutaneous sense organs, the correlation of neural processes is much more simple and direct. Increase of stimuli more readily leads over into a direct pain response, on the one hand, while correlation of neural processes either by way of supplementation or interruption of other connected neural processes, in the cortex or elsewhere, takes place more readily and less variantly. For example we may respond to temperature or tactual stimulation either unconsciously, or with the consciousness of both pleasantness and unpleasantness, or even with both unpleasantness and pain,

<sup>41</sup> Wild animals—and even human beings—are easily disturbed by a sharp sound or a distorted image in the periphery of the retina, while both animals and men may be pacified and even hypnotized by the regular recurrence of sounds or objects (rhythm and regular space movements) provided the recurrence is not abrupt. The device of providing simple music to increase the labor activity of workers is known to savages and was largely employed by tyrants and others in early times. The fact that we see landscapes, pictures, buildings, etc., in a series of planes is well known to landscape gardeners, architects, sculptors, painters, etc. Cf. Hirn, *Origins of Art*; Hildebrand, *The Problem of Form in Painting and Sculpture* (tr. Meyer and Ogden), New York, 1907.

and sometimes with pain and pleasantness, as in a case where we enjoy the warmth of the fire and at the same time experience pain from overstimulation of some of the temperature sense organs. Similarly, scratching or caressing may be both pleasurable and painful, pleasant alone, or without conscious results whatever.

The same general relationship of support and interference is also true of the ideational neural processes or highest cortical processes. But here the interference and supplementary connections appear to be the result of habit or training rather than of heredity—unless the cases in which the ideational neural processes arouse the sensory or visceral neural processes through association and thus establish relations with the basic vegetative neural set, with the usual results, can be shown to be hereditary connections.<sup>42</sup>

Thus the neural processes from the primitive visceral processes and the most primitive visceral and peripheral sensory neural processes (those later recognized as connected with sex and pain sensory consciousness) up through the various forms of exteroceptive sensory processes—the contact receptors and the distance receptors of the exteroceptive system, and the interoceptively connected peripheral sensory processes of taste and including the highest ideational neural or cortical processes, and including the highest ideational neural or cortical processes,

<sup>42</sup> Examples of such correlations are, the thinking of food one likes with the imagined sensory appearance of its specific favor and "watering" of the mouth, imaging of a sharp knife inflicting a wound with a dimmed imaginary sensation of pain and stiffening or shuddering or squirming movement of the body, etc. Whether we inherit any such correlations or merely acquire them is still a question in psychology. We certainly have large capacity for breaking up such co-ordinations, as in "getting used" to things. Some others that are unquestionably acquired are our attitudes toward books, people, pets, houses in which we live, various hobbies, etc. Professor Herrick, in speaking of the indefiniteness of the correlations of the higher neural processes in vertebrates, says, "In short, the educational period is limited to the age during which the epigenetic tissue, i.e., the correlation centers whose form is not predetermined in heredity, retains its plasticity under environmental influence. Ultimately even the cerebral cortex matures and loses its powers of reacting except in fixed modes. Its unspecialized tissue—originally a diffuse and equipotential nervous meshwork—becomes differentiated along definite lines and the fundamental pattern becomes more or less rigid."—*Science*, XXXI, 10.



furnish a descending scale of hereditary or instinctive correlation, i.e., supplementation and inhibition or interference, with the prevailing basic neural sets and processes. Those processes developed latterly in phylogeny appear to be less definitely and irreversibly associated by heredity in this way, till in the higher ideational neural processes it is doubtful if there is any but acquired definite correlation at all. Corresponding to these inherited and acquired neural attitudes of supplementation and conflict we have throughout the series a correlation of feeling modes, pleasantness and unpleasantness. Thus we find that pleasantness is usually connected with sex, sweet, etc., sensory and corresponding ideational neural processes, since these processes, because of their phylogenetic connections, usually supplement or strengthen the dominant neural sets. In the same way we ordinarily find unpleasantness associated with pain, bitter, sour, etc., sensory and related ideational neural processes, since these are generally inhibitive of the prevailing neural sets, because of their phylogenetic connections. But this close inherited neural adjustment and its correlative feeling adjustment is not definite and fixed. Both inherited and acquired pathways which are either inhibitive of or supplementary to the prevailing set may be modified so that it cannot be said of any one process, however fundamental phylogenetically, that it always and invariably results in either mode of feeling. In the higher and therefore less stable and less hereditary adjustments the interchange between interference and co-operation of processes is quite marked, so that in this region (as in a large range of visual and auditory impressions) it becomes quite impossible to foretell what feeling mode will follow the sensory impression, unless one is familiar with the habit acquirements of the person receiving it.

But with a completer development of the cortex or end segment and as the higher exteroceptive sensory neural processes (such as those of vision and audition) and finally the higher ideational neural processes<sup>43</sup> are added to the lower

<sup>43</sup> Professor Herrick makes consciousness a part of the general system of biological control. It is significant that the major part of imagery is visual and

exteroceptive sensory and motor, and the visceral, neural processes (such as the sensory processes of pain and sex connections and those of circulation, respiration, and digestion), the center of control of the organism is greatly modified. The ideational neural processes exert a large though perhaps not principal control over man, while the visceral and exteroceptive neural processes of various grades are most fundamental in making adjustments among the lower animals, where the nervous equipment is more nearly limited to these processes. In this way man comes to have a sensory and ideational life largely apart from the lower sensory and vegetative existence. A great deal of visual and auditory and cortical activity goes on without any appreciable connection with the lower nervous dispositions or sets, i.e., the vegetative, the sex and pain processes. We engage in conversation, we discuss problems in science, we hear music, view pictures, etc., with but little increase in vascular or respiratory activity and usually with no overt or conscious evidence of pain or organic and sexual neural activity. The explanation of this fact must be that the higher sensory and ideational neural processes are capable of going on without the necessity of neural correlation with the lower exteroceptive and visceral processes. Yet at such times we may have the most vivid feeling experience of pleasantness or unpleasantness. These feelings are certainly aroused in connection with scientific work, with viewing a picture or landscape, or viewing a back alley or dump, or with hearing music, quite as much as in connection with exercise, digestion, or sex and pain stimulation.<sup>44</sup> Evidently, therefore, we can have interference and supplementation of the higher sensory and ideational neural processes regardless more or less of the lower neural processes. However, even if such correlation is never wholly independent

auditory, graduating down through the other senses to pain, thus verifying Professor Herrick's statement that "the distance receptors . . . have dominated and set the direction of the evolution of the nervous system in vertebrates" (*Science*, XXXI, 8).

<sup>44</sup> Meyer thinks that feelings arising from higher sensory or ideational neural co-ordinations are the stronger. Cf. *Psy. Rev.*, XV, 320-21.

of the lower processes,<sup>45</sup> the connection is often so slight that we may have pleasantness or unpleasantness practically independent of or in opposition to them. Frequently we experience pleasantness thus aroused when we also have vascular and respiratory depression, or even pains of indigestion, surface pains, etc. In the same way unpleasantness arising from correlation of cortical and higher sensory neural processes may be experienced along with strong normal visceral activity. This antithesis is even more marked in the field of pathology.

Thus it appears that, whether we have to do with feeling in its more primitive aspect of direct or indirect correlation of visceral processes or of visceral with exteroceptive processes, or with feeling in its later evolutionary and functional aspect of correlations of the higher sensory and ideational neural processes more or less independent of the visceral and lower exteroceptive neural processes, such correlation is a purely internal matter. Feeling is a purely personal or individualistic phenomenon.<sup>46</sup>

Feeling is a simple or relatively unreflective form of consciousness, serving to make elementary adjustments of avoidance and acceptance of a more complex character than those made to direct stimulation and of a less complex character than those made on the basis of reflective or ideational consciousness. Just as feeling is not connected with simple sensation, so also it is at a minimum in the most complex thinking. It is only where we can go no further in thought, or when the think-

<sup>45</sup> Different people appear to vary largely in this respect, some being very emotional and others being in most respects habitually cool and unruffled. For some people all kinds of ideational and even higher sensory activity have marked overt results, in increased respiration, vascular extension (as blushing), etc., while other people experience none of these. Many people cannot, at least without practice, inhale putrid odors or even look upon blood or a painful performance without becoming sick and possibly vomiting. Sharp words sometimes, as does fatigue, bring sensations of pain to the surface of the body. Ellis (*Studies in the Psychology of Sex*) gives an instance of a woman habitually having primary sexual experience upon hearing music. Erotic music and pictures and histrionic representations generally have some such effect, usually in a milder degree, as is well known. But the ordinary forms of conversation and the higher forms of reasoning are usually without such visceral, or pain and sex concomitants as would indicate any particular neural connection.

<sup>46</sup> Judd, *Psy.*, 193, 202.

ing is really ended and the matter is "clear in our minds," when the problem is solved, that we have unpleasantness and pleasantness respectively as correlates of neural processes involved in higher thinking activity.<sup>47</sup> Really complex, i.e., the more sophisticated social, adjustments are not made on the basis of feeling response, just as they are not made on the basis of mere sensory reaction.

Feeling is also entirely relative as regards its object.<sup>48</sup> In connection with the lower and more instinctive processes, correlations are more or less definite and fixed, though apparently never completely and irreversibly so. Pain is usually unpleasant; sweet is usually pleasant. But the higher and more habitual or relatively uncontrolled processes enter into less and less definite correlations the higher we go in the exteroceptive scale, till we reach the stage of highly indefinite cortical correlations. These correlations can be made relatively definite however by fixing habits. As a matter of fact any habitual or instinctive correlation can be broken up or reformed, that is, any act may be made pleasant or unpleasant. The scourge, the sedentary self-torture amid vermin and filth of the Hindu fanatics, or the similar isolation of Stylites on the column, laceration of one's body, etc., may become sources of pleasure; while the taking of savory food, the sound of sweetest music, the odor of roses, or the sexual act may become the agents of the most unbearable unpleasantness. For this reason feeling modes cannot be effective guides to social adjustment and control. In a purely instinctive or static, i.e., habit-controlled, world where, hypothetically, everything remains forever the same, feeling might operate as a successful criterion for race adjustment. It might, barring cataclysm and the unexpected, work toward the escape from danger and the reproduction and feeding of the greatest number of individuals not competing or co-operating with each other, except on an animal plane—though this may be said to be doubtful.<sup>49</sup>

<sup>47</sup> Cf. James Ward, *op. cit.*; and Dewey, "Theory of Emotion," *Psy. Rev.*, II, 31.

<sup>48</sup> Cf. Titchener, *op. cit.*, 108.

<sup>49</sup> Cf. S. J. Holmes, "Pleasure, Pain, and Intelligence," *Jour. of Compar. Neurology and Psychol.*, XX, 148-49.

But in a world where training must modify instinct, where the cultural and artificial rather than the habitual and "natural" set the standard, in a social and moral world in the best sense, feeling cannot serve as a guide for the preservation of the individual and much less of society.

This principle of the relativity of feeling and of its unreliableness as a guide or measure of values is applicable throughout the present discussion. In a less degree, the same relativity can be predicated of all conscious processes. That no idea, image, or sensory process is always absolutely valid or fixed in content has been pretty well known from the time of Locke.<sup>50</sup> That is to say, no subjectivistic criterion is wholly dependable as a measure of values, and any such criterion is the more dependable the more it is checked up by objective reference, i.e., by sensory experiences and objective controls of as many types as possible. Feeling as the conscious part of mere correlation, i.e., as supplementation and interference of neural processes, is the least able to be so checked up, and is consequently the least reliable of all subjective criteria or evaluations of action in an objective and social world. Thus in the light of a better knowledge of the total biological functioning, the statements of both old and modern psychologists and philosophers to the effect that pleasure is a sign of the health of the organism, of its successful functioning, of the presence of energy, etc.,<sup>51</sup> appear absolutely inadequate. Feeling indicates only certain internal nervous adjustments on the basis of instinctive or habitual disposition and not gross and inclusive bodily or organic adjustments. Such views indicate a closer acquaintance with the hypothetical and simplified conditions of instinctive life or of life regulated by the philosopher's logic than with the more complex determinants of human social life. These are facts which the sociology of the future, if it is to be functional, must apply.

<sup>50</sup> Cf. Locke, *op. cit.*, Bk. II, chaps. xxix-xxxii.

<sup>51</sup> Cf. Ribot, Bain, Judd, Titchener, Marshall, etc., above.

## III. THE CAUSE OF THE ACT

NATURE OF THE ACT.—THEORIES OF THE CAUSE OF THE ACT.—

THE ACTUAL CAUSE OF THE ACT.—FEELING AS CAUSE.—THE  
CAUSE OF THE ACT AS RELATED TO THE END OF THE  
ACTIVITY

The problem of this chapter is to determine the relation of feeling to the act. Preliminary to discussing this matter in detail it seems necessary, (1) briefly to analyze the act itself and (2) to review the conclusions of a number of representative writers on the relation of feeling to the act.

Up to the time when Bain formulated the theory of spontaneity in activity,<sup>1</sup> not much distinction had been made in philosophical and psychological discussion between conscious and unconscious activity. It was rather the custom of writers up to that time to ignore all activity except that of which the actor was supposed to be conscious. Their investigations of activity were logical rather than biological and functional.<sup>2</sup> Though Bain was largely influenced in his contribution by the development of biological knowledge, his successors in mental science, with greater opportunity for such investigation, have not made the advance in this line of thinking that might have been expected of them. The distinction between unconscious and conscious activity is still very inadequately if at all applied to ethical and social science, and has not entered effectively even into psychology, which still continues to be largely logical and structural.<sup>3</sup> This limitation of the treatment of the act was a great stumbling-block to the utilitarians and to their predecessors and successors.

<sup>1</sup> *Emotions and Will* (3d ed.), 201. For a recent statement of the theory see Jennings, *Behavior of the Lower Organisms*, 284 ff.

<sup>2</sup> This attitude was probably the result of the old theocratic philosophy which looked upon man as provided either with an infallible and omniscient conscience or with an equally infallible objective revelation which he was supposed to be able in some unexplained way to interpret omnisciently. In other words, the philosophy which posited an omniscient and all-conscious deity also posited an omniscient and all-conscious human being as the deity's correlate or alter.

<sup>3</sup> For further discussion of this point see McDougall, *Physiological Psy.*, 1, 2.

To avoid the limitations imposed by such a conception of activity we may be justified, perhaps, in isolating four different types of activity with reference to the degree of consciousness involved in the conduct. The first is activity from mass impact. The human organism, of course, never reacts exactly like an inanimate object, because its internal capacity for ready adjustment, for breaking shock and controlling the direction of motion, is essentially different. But there are nevertheless a very large number of organic movements which are beyond the immediate powers of adjustment by the individuals—discounting, of course, the nearly constant influence of gravity. This is, socially considered, the least important type of activity and may for the present be ignored. The second is reflexive and instinctive and habitual activity proceeding from stimuli over which the organism is for the most part in control, but in which consciousness does not enter till after the act, if at all, and consequently cannot be a guide to that act. The third is a subdivision of the second, in which activity is instinctively and reflexively initiated, but in which consciousness enters in the midst of the act as a “corrective” to secure more efficient control. The fourth is a type in which the activity is more or less consciously planned and in which the organism consciously seeks stimulus to the activity. It is impossible, however, completely to foresee all the conditions of an act, i.e., to anticipate all the stimuli and to estimate accurately the resistance of the organism to the stimuli. Consequently no previsioned act is ever wholly consciously controlled.<sup>4</sup> The second and third type of activity are by far the most important individually and socially, while the fourth is of secondary importance in the matter of maintaining social adjustment and control, though it must always be appealed to in making radical changes or in projecting social ideals. But the larger part of social activity and social conformity is not on this plane. The fourth is really the conscious part of the third, more or less abstracted and adequately controlled. It is this

<sup>4</sup>Woodworth brings this fact out clearly in “The Cause of a Voluntary Movement,” *Studies in Philosophy and Psychology* (Garman Memorial Volume).

particular fourth type of activity with which the utilitarians and other earlier philosophers dealt, and it is to this type also that modern ethicists and many sociologists insist upon confining themselves.<sup>5</sup> Any complete statement of the social process, i.e., of social adjustments, and hence of the conditions of social activity, must rest upon all four types. The very assumption that feeling (as a form of consciousness) alone is the cause of conduct and activity is a negation of all except the last.

From Hobbes to Meakin,<sup>6</sup> the latest apologist for the hedonic criterion in ethics and in social control, the line of emphasis has not essentially changed among the advocates of feeling as the cause of activity.<sup>7</sup> Hobbes held, in his own terminology, that both ideas of activities accompanied by pleasantness and unpleasantness and the feelings themselves are causes of activity.<sup>8</sup> All the other hedonistic psychologists and philosophers explicitly or indirectly emphasize the same relationship between feeling and action.<sup>9</sup> Only a few mention other than conscious

<sup>5</sup> Cf. Dewey and Tufts, *op. cit.*; Judd, *Psy. Rev.* (March, 1910), 78, 80; Ward, *Psychic Factors of Civilization*, 129-30; Small, *General Sociology*, 184, as examples.

<sup>6</sup> *Function, Feeling, and Conduct* (New York, Putnam, 1910).

<sup>7</sup> In considering the various views of the cause of the act based upon a hedonistic criterion, it is necessary to keep in mind the great diversity of meanings which feeling has had in the history of psychology, and also the fact that it is often very difficult to determine whether the conscious process which any particular author has in mind is sensory, ideational, or feeling proper.

<sup>8</sup> Hobbes says that pleasures and pains of sense move us directly to action, since they are "motions" or "endeavours" which proceed from external objects through the sense organs to the heart and there appear as "appetite" and "aversion" (*Leviathan, loc. cit.*, 42). Other motions "arise from the expectation, that proceeds from the foresight of the end, or consequences of things; whether these things in the sense please or displease." These are pleasures and pains of the mind and likewise impel to action (*ibid.*, 43).

<sup>9</sup> The citations in this and the two following notes are necessarily incomplete. They embrace, however, as large a number of fields of investigation and as large a scope of territory as are possible within the limits of space available, keeping in mind, of course, the fact that the main discussion of this study centers around the English and American ethical and social philosophy. For additional citations in convenient form, see Wright, *op. cit.*

Helvetius goes a step farther than Hobbes and assumes, besides a world of physical forces, one of mental forces in which pleasure and pain are masters



causes of activity. All however agree that no conscious activity can be caused otherwise than by feeling, though all at different times plainly confuse feeling with sensory and ideational processes proper. All alike appear to be ignorant of this distinction, though contemporaries of some of the later writers have pointed it out more or less clearly.

of activity and thought: "[God says to man] Je te mets sous la garde du plaisir et de la douleur: l'un et l'autre veilleront à tes pensées, à tes actions; engendront tes passions; exciteront tes aversions, tes amités, tes tendresses, tes fureurs; allumeront tes désirs, tes craintes, tes espérances; te dévoileront des vérités; te plongeront dans des erreurs; et, après t'avoir fait enfanter mille systèmes absurdes et différents de morale et de législation, te découvriront un jour les principes simples, au développement desquels est attaché l'ordre et le bonheur du monde moral" (*De l'esprit*, 322). Locke: "That which immediately determines the will . . . to every voluntary action, is the uneasiness of desire fixed upon some negative (absent) good," as freedom from pain and "enjoyment of pleasure." And that which moves desire is "Happiness, and that alone" (*op. cit.*, Bk. II, chap. xxi, secs. 33 and 41). Bentham: "Nature has placed mankind under the governance of two sovereign masters, *pain* and *pleasure*. It is for them alone to point out what we ought to do, as well as to determine what we shall do" (*op. cit.*, chap. i, sec. 1). Also, "Among all the several psychological entities . . . the main pillars or *foundations* of all the rest—the *matter* of which all the rest are composed— . . . will be . . . seen to be, *Pleasures and Pains*." These are the "springs of action" ("The Springs of Action," *Works* [ed. Bowring], I, 211). Bain: "Some pleasure or pain, near or remote, is essential to every volitional effort, or every change from quiescence to movement, or from one movement to another" (*Emotions and Will* [3d ed.], 350). "Without some antecedent of pleasurable or painful feeling—actual or ideal, primary or derivative—the will cannot be stimulated" (*ibid.*, 354). He defines volition as "the operation of pleasures and pains for stimulating activities for ends" (*ibid.*, 315-16). Movements are at first spontaneous and random (*Senses and Intellect*, 300). Suitable activities are selected and fixed by pleasure, which has become fortuitously connected with them (*Emotions and Will*, 315). Baldwin takes essentially the same view (*Handbook of Psychology; Emotions and Will*, 301-3). He also has an elaborate classification of motives (*ibid.*, 332). Leslie Stephen: "Pain and pleasure are . . . the determining causes of action . . . the sole and ultimate causes. . . . Will is always determined by the actual painfulness or pleasantness of the choice at the moment of choosing" (*Science of Ethics*, 50). The feeling is reflected back from the provisioned act, as it were, and becomes the actual motive force (*ibid.*, 54). He regards feeling as a true psychical force (*ibid.*, 57). Lester F. Ward also regards the feelings, especially after memory has made them into desires (*Psychic Factors of Civilization*, 52), as psychic forces (*Pure Sociology*, 132), and he even terms the science of the operation of these desires "mental physics" or *psychics* (*Psychic Factors of Civilization*, 129). This is a terminology which reminds one somewhat of Hobbes (*op. cit.*, 42) and of Comte in a more general sense (*Positive*

There are two other types of writers—only partially or not at all hedonistic, though for the most part individualistic, in their viewpoint—who deal with the cause of the act. Those of one class regard feeling as one, and only one, of the factors in determining conscious choice.<sup>10</sup>

*Philosophy* [Martineau's transl.], Bk. VI). Painful and pleasurable sensations, he says further, are respectively the causes of action away from and toward objects (*Psychic Factors of Civilization*, 126). He also declares that desire, which he characterizes as "in its essential nature . . . a form of pain" (*ibid.*, 54), "is the all-pervading, world-animating principle, the universal *nîsus* and pulse of nature, the mainspring of all action, and the life-power of the world" (*ibid.*, 55). Spencer: "The feelings have in common the character that they cause bodily action which is violent in proportion as they are intense" (*Principles of Psy.*, II, 541). "The emotions are the masters, the intellect is the servant. The guidance of our acts through perception and reason has for its end the satisfaction of feelings" ("Feeling vs. Intellect," *Facts and Comments*, 38). L. F. Ward, Bain, and others concur in this view. J. R. Angell: "Some such symbols [as agreeableness and disagreeableness] there must be, if consciousness is to steer successfully among new surroundings and in strange environments" (*Psy.*, 273). S. N. Patton: "There is always an endeavor to increase pleasure and to avoid pain if the animal is conscious of these emotions" (*Theory of Social Forces*, chap. i, sec. 1). Jevons bases his theory entirely upon a calculation of pleasure and pain and declares the object of political economy to be to determine the maximum amount of happiness which can be realized in purchasing the greatest possible amount of pleasure with the least possible amount of pain (*Theory of Political Economy* [3d ed.], 37). Frederick Meakin: "For the ground of choice we are referred, ultimately, to the pleasurable or painful functional act" (*op. cit.*, 37).

<sup>10</sup> Titchener regards attention as the only cause of voluntary action in primitive consciousness, and in his opinion attention was limited to the intrinsically pleasant and unpleasant (*Outlines of Psy.*, 250). With the introduction of *action upon representation*, or with the appearance of memory, other elements than affection came to operate in psychical causation (*ibid.*, 254 ff.). Thorndike declares that "any mental state may serve as a motive. . . . One of the most artificial doctrines about human nature which has ever acquired prominence is the doctrine that pleasure and pain, felt or imagined, are the only motives to action, that a human being is constantly making a conscious or unconscious calculation of the amount of each which the contemplated act will produce, and that his entire behavior is the result of such a life-long complicated series in sums in addition and subtraction. Pleasure and pain do play a leading rôle in determining action, but the cast of characters includes also percepts, ideas and emotions of all sorts" (*Elements of Psy.*, 284). Lotze: "The pleasure of sense is not only the goal toward which all the activity of living creatures originally moves, but we find that in civilized life also it is the hidden spring of the most various actions" (*op. cit.*, I, 696-97). He adds, however, that conscience is the only absolute guide (*ibid.*, I, 696). Sidgwick recognizes "pleasure" and "pain"

Those of the other type hold that feeling can never be such a cause.<sup>11</sup> The main value of a study of these views consists in the fact that, (1) it indicates the confusion in which all mental, ethical, and social science has been and yet is, in regard to a criterion for the cause of the act; (2) it points out through

as "feelings" which stimulate to actions producing or sustaining the former and removing or averting the latter (*Methods of Ethics*, 42, 43). However, "A man's conscious [!] desire is," he thinks, "more often than not chiefly extra-regarding" (*ibid.*, 51), while impulses occur quite regardless of pleasant or unpleasant results (*ibid.*, 53). Thus Sidgwick holds to a teleological statement of unconscious as well as conscious activities. Martineau holds that if one exercises prudential preference he may act with regard to pleasurable or painful effects, but that the springs of action within us [conscience] are the proper moral guides, and they do not take cognizance of pleasure and pain (*op. cit.*, II, 70).

<sup>11</sup> Between Martineau's view (mentioned in the preceding note), aside from his criterion of conscience, and the views of Sorley, James, Dewey, Butler, and others there is little difference, aside from terminology and a more complete analysis of the act. All these latter writers hold that the idea must be the immediate or actual cause of the act. Sorley: "We must aim not at pleasure *per se* but at objects which we have reason to believe will be accompanied by pleasurable feeling" (*Ethics of Naturalism*, 188). James: "A willed movement is a movement preceded by an idea of itself" (*op. cit.*, II, 580). Ideas of pleasure and pain are among these "motor spurs" (*ibid.*, II, 559). James's use of language is sometimes contradictory, and one could in places make out that he argues that "pleasure and pain" are direct causes. This doubtless results from his constantly confusing feeling with sensation. Höffding: "The impulse is essentially determined by an idea, is a striving after the content of this idea," which, however, may refer to pleasure-giving experience (*op. cit.*, 323). Butler long ago maintained that "all particular appetites and passions are towards *external things themselves*, distinct from the *pleasure arising from them*," and that "there could not be this pleasure, were it not for that prior suitableness between the object and the passion" (Sermon XI). Green takes essentially the same view (*op. cit.*, 168) as does Dewey (Dewey and Tufts, *Ethics*, 270), though the latter adds that "the anticipation of pleasure in its fulfilment may normally intensify the putting forth of energy, may give an extra reinforcement to flagging effort" (*ibid.*, 271). Marshall holds that "pleasure-pain" may serve to fix the useful adjustments and to eradicate the harmful ones (*op. cit.*, 262), though it is by no means an absolute criterion (*ibid.*, 352). McDougall: "Pleasure and pain are not in themselves springs of action, but at the most of undirected movements; they serve rather to modify the instinctive processes, pleasure tending to sustain and prolong any mode of action, pain to cut it short; under their prompting guidance are effected those modifications and adaptations of the instinctive bodily movements" (*Introduction to Social Psychology*, 43). Judd: "It is too abbreviated a form of statement to say in this case that the pleasure of success leads the mind to select the appropriate activity; the fact is rather that the

illustrations that until recently at least, if not still, feeling modes have been regarded by most writers of importance as the only or the chief causes of the consciously chosen act; (3) that those, like Martineau and Lotze, who thought of the act as properly caused in some other way, were prone to substitute some other more or less individualistic criterion, such as conscience, as the cause, as will appear more clearly in chap. iv when the ends of action are discussed. (4) It is apparent also that some of the older writers, like Hobbes, Helvetius, and Bentham, did not take into consideration any causes other than conscious ones; nor has this confusion wholly disappeared at the present time. (5) We have also an indication, though incomplete, of how the prevailing social theory until the most recent times has followed the lead of Bentham, Locke, and Hobbes in accepting a hedonistic psychological basis. An expansion of this statement will also occur in the following chapters.<sup>12</sup>

What then is the actual part which feeling modes play in the causation of the act? To answer this question properly it will be necessary first to determine what part consciousness of any sort plays in such causation. Woodworth denies that imagery of any kind is necessary to setting off even a voluntary act, and

pleasure comes because the selection has been successfully made in a natural way" (*Psy.*, 225). Fite: "The ethical consequence of the functional view is to render it inconceivable that we should choose pleasure as an end, and hence, impossible to set up pleasure as the end to be sought. According to the functional view, the motive power of action is instinct, and it is the object implied in the instinct which constitutes the end. In this system there is no room for the motive of pleasure. Pleasure is simply an abstracted phase of the process of satisfaction—an indication that the object is being attained in the presence of a difficulty. In other words, pleasure is not an active force or function, but a mere phenomenon. The desire for pleasure, if conceivable at all, would be irreconcilable with the desire for the object; for since pleasure exists only while success is deferred, pleasure as such could be prolonged only by sacrificing the object originally sought" ("The Place of Pleasure and Pain in the Functional Psychology," *Psy. Rev.*, X, 643-44).

<sup>12</sup> Also some of the more recent sociologists, who have largely or wholly abandoned the hedonistic criterion, still hold to subjectivistic and individualistic classifications of the springs of action, even though these classifications are for the most part mere ornamenta which their authors do not seek or are unable to apply. (Cf. chap. iv, below, and A. F. Bentley, *The Process of Government*, chap. vii.)

contends that "the complete determinant of a voluntary motor act . . . is nothing less than the total set of the nervous system at the moment."<sup>13</sup>

It is not necessary here to enter into a discussion as to whether consciousness can be non-imaginal,<sup>14</sup> but it must be admitted that the total cause of any act is more than the conscious part of it. When an idea or image precedes the act, i.e., when the neural pathway or the act runs through the cortex (as it must when there is considerable conflict and impediment to its overt expression), the act is termed voluntary. Because we are not able to determine the total set of the nervous system, we seize upon its most obvious and immediate sign, the percept or image, and call it the cause, though it is really only the sign of the whole act of which it is but a part. If the process of ideation be a long one, i.e., if the process by which an act finally gets overt expression is modified by a great many inhibitions occupying some appreciable extent of time, we term the sub-

<sup>13</sup> "[No] form of sensorial image of the movement or of its outcome need be present in consciousness in the moment just preceding the innervation. Imagery, kinaesthetic, tactile, visual, auditory, may or may not be present at the launching of a voluntary movement; when present, it seems, in many persons, at least, to be incidental rather than essential to the process."—Woodworth, *op. cit.*, 356.

"Where imagery is lacking, peripheral sensations are sometimes present in the field of attention, but after these cases are abstracted, there still remain a goodly share of the whole number [about one-fifth] . . . in whom no sensorial content could be detected."—*Ibid.*, 376.

"The complete determinant of a voluntary motor act—that which specifies exactly what act it shall be—is nothing less than the total set of the nervous system at the moment. The set is determined partly by factors of long standing, instincts and habits, partly by the sensations of the moment, partly by recent perceptions of the situation and by other thoughts lately present in consciousness; at the moment, however, these factors, though they contribute essentially to the set of the system, are for the most part present in consciousness only as a background or "fringe," if at all, while the attention is occupied by the thought of some particular change to be effected in the situation. The thought may be clothed in sensorial images—rags and tatters, or gorgeous raiment—but these are after all only clothes, and a naked thought [!] can perfectly well perform its function of starting the motor machinery in action and determining the point and object of its application."—*Ibid.*, 391-92.

<sup>14</sup> For such a discussion see the above-mentioned monograph by Woodworth; also Titchener, *The Experimental Psychology of the Thought-Processes* (New York, 1910).

jective process *thinking*, and we speak of the thought as the cause of our activity, while it is only the sign or index of the whole act of which it is a part.

In the same way it has been customary to speak of feeling as the cause of activity, because we knew little or nothing of its neural correlates and because it is a very immediate experience. Feeling, however, is also but a sign of the whole act, and is even farther removed from the general causal process in its completeness than is the idea. As was above pointed out, pleasantness accompanies neural processes which supplement each other or which supplement the more stable, though lower, visceral and vegetative neural processes. Unpleasantness accompanies interference of processes, either of the higher sensory ones with each other or of these with the lower basic sets, when consciousness accompanies such nervous activity. Feeling modes then are resultants of internal neural adjustments or of internal neural interferences, which correlation probably is made in the cortex only when feeling is experienced. It is absurd to speak of these feeling modes as the cause of such neural relations, which go over into overt activity as acts in the common usage of that term, unless we do so in the sense that if there had not been such supplementation and interference or inhibition of processes (resulting at times in such feelings and also in more or less corresponding acts) we should have acted differently.<sup>15</sup> But this is not an efficient and functional explanation of the act. It would be just as absurd also to say that feeling dictates causative ideas or dictates their recall in memory. The idea, like the act, can be accounted for only on the basis of the whole neural set. The feeling mode must be explained in terms of the correlation of parts of that set, of processes, with each other.

However, we can appeal from objective analysis and the experimental method to the evidence of introspection (though this sort of appeal is no longer in the best standing), and we may get a confirmation of the direct or indirect causal nature of feeling. Certainly introspection tells us that we frequently choose activities because we have reason to believe that they will

<sup>15</sup> Cf. Meyer, *Psy. Rev.*, XV, 319.

afford pleasantness and avoid others because they usually give unpleasantness. This of course is all on the assumption that the idea of the thing can cause the act, which was discussed in the paragraph immediately preceding.<sup>16</sup> It is generally held, however, that the feeling itself cannot be representative<sup>17</sup> and thus cannot cause the act in the same way as the idea is supposed to be able to do. It is the idea of the act, which it is believed will result in certain feeling modes, that is supposed to be the cause of the representatively or ideationally caused or accompanied act.<sup>18</sup> Introspection, then, tells us that we do frequently choose future activities with reference to whether they will be pleasant or unpleasant. And it also tells us that we perhaps at least as often choose activities without regard for or despite their pre-visionsed feeling results. The introspective evidence is as valid in the one case as in the other.<sup>19</sup>

Accepting the introspective account and the introspective terminology, what activities may we say, then, are the result of feeling, in the sense that the perceived hedonic consequences of an act influence our choice of action and ends? It becomes clear at once, as Marshall points out,<sup>20</sup> that a large number of unforeseen or stubborn circumstances interrupt the course of our mental and neural action and thus cause dissatisfaction. But allowing for these interruptions, in how far yet can we consciously seek pleasure and find it? The answer appears to be, In so far as we have the technique and ability for molding all objective social and physical processes and transformations to fit our immediate subjective ends and adjustments. That is, if

<sup>16</sup> Cf. also notes 9, 10, and 11 above, this chapter.

<sup>17</sup> Cf. Angell, *Psy.*, 266-67.

<sup>18</sup> Cf. James, *op. cit.*, II, 580; Thorndike, *op. cit.*; also Ribot, *op. cit.*, 190: "A l'origine, le plaisir est un *effet*. . . . Plus tard, il devient une *cause* d'action."

<sup>19</sup> This type of case where introspection tells us that we choose the pleasant act and avoid the unpleasant is not different from the supposed type of cases, abstracted by the older philosophers, in which pleasure and pain were spoken of as direct causes, except in the amount of time intervening between the stimulus and the response. In the latter type the choice and the feeling seem to be synchronous.

<sup>20</sup> *Op. cit.*, 350-51.

we make the experience of pleasantness and the avoidance of unpleasantness the end of our endeavors, we can realize this end in so far as we can immediately and in the large control our environment. We must begin first to control our ideational and imaginal processes to this end. But this cannot be done most effectively without also controlling our physiological processes in the service of both ideation and feeling. Then, in the third place, we must be able to control our immediate environment in the form of material and social conditions, to which end the more narrowly "social" and financial conditions are to some degree essential. And fourthly, and least of all, we must be able to exert an effective though indirect control over the wider societary environment—at least enough to make sure of our immediate physiological and narrowly "social" adjustments.

This method is employed constantly with more or less success and with varying emphasis upon different details. Eastern voluptuaries and tyrants have tried it and have fairly succeeded—at least so long as they could control their adjustments as described above.<sup>21</sup> Artists of all sorts have traditionally been accustomed to withdraw themselves into an esoteric world in which the chief assets of their happiness appear to be their reveries which go along with their "artistic temperaments," the reverence which the unsophisticated have for them, and non-interference from a world of fact. Indeed it has been asserted repeatedly by artists and litterateurs that genius is a lawless thing.<sup>22</sup> Among the most successful devotees of this general method of securing pleasure and avoiding unpleasant experience, however unconscious the devotees may be of the philosophy of the method, are the women and men of fashion and pleasure.

<sup>21</sup> It has long been a custom of deposed monarchs, politicians, etc., to go into "retirement" and to assemble about them as much of their petty paraphernalia as possible and to piece out the situation by living on their memories. The Roman emperor Diocletian, who could not control his kingdom, took up cabbage raising and evidently would have been happy if he could have persuaded his rival to grow cabbages also.

<sup>22</sup> Modern society appears quite confused as to whether this is the proper statement or whether it should be, Lawlessness is genius. Perhaps there is not enough difference between the two formulae to argue about.



These are especially conspicuous in our modern world, where mechanical technique makes possible the accumulation of vast wealth and numerous accessories of personal satisfaction; but they were not lacking to earlier societies. The elaborate functions and social ceremonies of Rome were second only in the matter of refinement of adjustments to the social whirl and dissipation in modern Paris or any great European or American city.<sup>23</sup> Less striking examples can be found in the men with "hobbies" anywhere, the devotee of a game, the professional gambler, all types of hedonic amateurs, so long as these "hobbies," etc., remain personal pendants. Such satisfaction is necessarily individualistic, and the more one's satisfactions become dependent upon a wider and more objective field of control the less invariably is one likely to be satisfied—at least under the present social order.

But the really social individual, in the broader sense, is not the one who acts with individual reference, that is, with the production of subjective or conscious states as his end. The person who attempts to understand the world and to work for efficient social control and expression is the one who operates with reference to social processes in the wide, whose end is the

<sup>23</sup> The details of the practice by which a modern woman of fashion lives a butterfly life of pleasures are too familiar from the literature of the time to require description here. Her thoughts are not arduous, but she takes the utmost care—by proxy—that there shall be no discord in them. A large part of her time is given to the luxurious care of her body—by others—and the remainder is divided between her clothes and fashionable functions or personal and sensuous gratifications, involving ceaseless change and inconstancy or anarchy of social purpose. Practically all the ordinary gross stimuli, such as light and color effects, sound, touch, taste, and odor, are carefully controlled for her. Customary morality in many cases drops out, especially in the realm of sexual experience, where social conformity would make inroads upon other pleasurable adjustments. Financial adjustments remain so much on the margin of her experience that they rarely come into her consciousness, except at a crisis in her career. The matter of her more narrowly "social" adjustments, the problem of retaining her prestige and of eliminating her "inferiors," perhaps disturbs her most. Such a picture has a feeble counterpart in the Greek and Roman courtesans (cf. DeCassagnac, *History of the Working Classes*, chap. xvii) and in the harems of the East of today. It is an extreme illustration, but it is not untrue to the facts, and is the nearest approach to perfect uninterrupted self-gratification that the modern and "strenuous" western world can boast.

securing of a co-ordinated or social adjustment to nature or to the whole process of life, in whatever terms he may express his intent or in whatever manner he may act. He attempts to discover the conditions of the most effective social life and then to bring these conditions about and to adjust himself to them. The life and growth of the group, often of the broadest group, not his own individual happiness, not an economy of personal pleasantness and unpleasantness, become his criterion. While the hedonist begins by seeking to control his own mental and bodily processes in the interest of his personal satisfactions, the social individual, the one who has a scientific social criterion of conduct, rather than the socius *de facto*,<sup>24</sup> begins with group and race adjustment. As earlier pointed out, his criterion is social conservation rather than individual gratification. It cannot be said of such an individual either that he seeks pleasure or that he finds it in the largest or most constant measure, but that he is effective or functional in a progressively social world.

This type as such is just emerging. It had its forerunners in all those who caught glimpses of a civic spirit and rebelled against a narrow personal standard. The Stoics, the patriots of all ages, frequently the founders of religions, the advocates of divine right in government, the advocates of the theory of the moral sense and like doctrines, who sought to make authority broader than mere individual whim and pleasure, are examples. But practically all of them remained personal and subjectivistic in their criteria. The self of the individual or of the deity or monarch was the final arbiter. Cases of asceticism or of self-torture of the kind indulged in by St. Simon Stylites were doubtless protests against a hedonistic order but were ineffective because they could not get away from a subjectivistic criterion and fix upon objective social service as a substitute. There was no conception and analysis of society which would permit of this substitution. The nearest approach to the modern type was

<sup>24</sup> All individuals are of course social in the question-begging sense that they exist in a world of people and were born with capacities for adjustment to that world (cf. Mead, *op. cit.*, and Houssay, *Rev. philosophique* [May, 1893], 475), but this does not necessarily signify that they are constructively or progressively social.

the patriot who accepted the traditional spirit of his country or city as the inspiration of his cause. This was a collectivistic rather than an individualistic criterion, though not a scientifically determined criterion. The same collectivistic criterion can, of course, in some measure be attributed also to the absolutism of the priestly and political powers. But the modern socius is distinguished from the earlier in so far as he approaches to a scientific social criterion of conduct.

It would, however, be a mistake to suppose that the truly social individual, because he does not seek pleasure or happiness, never experiences satisfaction.<sup>25</sup> In the first place no one is truly social in an inadequately social world. In an adequately controlled social world the results of seeking to further that control doubtless come more and more to be pleasurable. That is, one's habitual and conscious attitudes, based upon a knowledge of social facts and laws rather than upon mere conformity to the existing social order, regardless of what it may be on a wider view, on the one hand, and not upon self-gratification on the other hand, come to be less and less interrupted and broken down as the world becomes more completely and scientifically rather than whimsically socially controlled. Again, one may choose his activity with regard to the broader ends or more scientifically determined values of the group or social organism as a whole, because he sees in a particular case that such a course will also bring him more personal satisfaction. But, as social life and activities are now organized, at least, such coincidence of the wider and more far-reaching social good and his personal satisfaction does not often occur; and perhaps with man as he is—still largely a creature of early instinctive adjustments to conditions of race survival mainly on the level of the lower co-ordinations and processes—such coincidence can never be made complete.<sup>26</sup> The nearest approach to accomplishing such

<sup>25</sup> The Stoics, Puritans, and other sects and factions appear to have pushed a general truth to the extreme in assuming that because the righteous or social individual cannot always be happy, it should be his constant endeavor never to be so or not to seem so.

<sup>26</sup> "No proposition can be more palpably and egregiously false than the assertion that as far as this world is concerned it is invariably conducive to the

a thing is to control social activity in such a way and to such an extent that the desired habits can replace mere instinct and the fortuitously or wrongly acquired habits now dominant, when these conflict with the desired order. But this is necessarily an unpleasant task. It is further true that the consciousness of always working in a "good, even if hopeless" cause may react pleasantly upon the actor, and this is doubtless in the majority of cases a great sustaining factor. But if it is too much relied upon it is almost certain to turn one into the self-satisfied and dogmatic reformer who himself becomes a hedonist in the place of a social individual or true socius.<sup>27</sup>

In addition to the conclusions drawn in connection with the discussion of the various theories of the cause of the act, further implications of primary importance which should be carried over from the present and preceding chapters for application to the subsequent discussion are: (1) that feeling is a purely individualistic and subjectivistic criterion of evaluation, (2) that feeling can be a cause of activity only when mental states or processes rather than objective social results are made the ends of attention and effort, (3) that pleasurable feeling can become attached to any activity regardless of the social or even individual value of that activity, and hence (4) that the sanction or evaluation of feeling upon conduct is worthless as a criterion of the individual or social utility of that conduct.

[To be continued]

happiness of a man to pursue the most virtuous career."—Lecky, *History of European Morals* (New York, 1884), 61. Leslie Stephen takes the same view, though an advocate of the doctrine that all activity is caused by feeling. Cf. *Science of Ethics*, 433.

<sup>27</sup> Cf. Dewey and Tufts, *Ethics*, 303.